Department of Environmental Protection

Bureau of Land & Water Quality Apr. 1999

10 Steps to Dealing with Y2K (the "Millenium Bug")

There is growing concern that as we pass from December 31, 1999 to January 1, 2000, many computer controlled devices which depend on knowing what the date is will fail. This is because many computers and computer programs carry only two digits of the year. Thus, when the year 2000 come around, they will read "00" and think it's the year 1900. In some systems that would make me – 50 years old. That's not good if the computer cutting my paycheck doesn't think I've been born yet. The checklist below was adapted from a similar list by Jim Seymour in the April 6, 1999 issue of *PC Magazine*. We'll be publishing more information about Y2K in the O&M News. If you want to find out more, there are many other publications dealing with this issue.

10. Examine your facility carefully and inventory all the Programmable Logic Controllers (PLC's) in your facility. Write down the make and model of each PLC. Contact the vendor who supplied the PLC's and ask if they have a Year 2000 problem. The vendor should know or be able to find out if the PLC's you have are Y2K compliant and, if not, whether they can be upgraded or if they have to be replaced.

9. You'll probably have to deal with the Y2K bug in your own facility. There is no Y2K "SWAT" team out there to come to your rescue. The State and Federal Governments can provide guidance, like this article and some of the Internet sites listed below, but we can't come to each facility and find and fix your Y2K problems. It is up to you.

8. If you have any computer software that you rely on for process control, billing, accounting, whatever… TEST IT NOW!!! You still have several months to get problems fixed if you find them early. If you wait until the Fall, or worse, until next January, finding someone to get the problem fixed will be much more difficult and probably more expensive.

7. Although there is little chance that your utility service will be disrupted, you should make sure that your back-up systems are in good repair and operating correctly. Back-up generators should be exercised under load, have fresh oil and plenty of fuel. Your plant water pumps, valves and pipes should be checked and maintained so that you can be sure of water supply to critical processes if the municipal water supply is unavailable. Again, the loss of power, water or other utilities is unlikely, but, as we learned during the ice storm, it's never bad to be prepared.

6. Check with your vendors and make sure they can maintain delivery of critical materials and supplies.

5. If there is any question about your suppliers' abilities to maintain your stocks, you should have adequate supplies of all necessary chemicals and other consumable materials on site. For most of you, disinfection is not required during December and January. For those of you required to disinfect year-round, make sure you have adequate chlorine and dechlorination chemicals on hand. Check your lab supplies and make sure that you have enough reagents and other consumables.

4. Check your computer hardware. There are several Internet sites where you can find programs that will perform checks on your hardware. Some older computers won't "roll over" from December 31, 1999 to January 1, 2000. Some will roll over when they're on but when you turn them off and restart them, they think its January 1, 1900, and you have to reset the date every time you start the computer. Some computers also don't recognize the fact that the year 2000 is a leap year. Years divisible by 100 and normally not leap years but years divisible by 400 *are* leap years and the year 2000 is divisible by 400! If your computer fails any of the tests, you may be able to find a software (program) fix or you may have to replace the BIOS chip (that may cost $100 or more). At worst, if you have a really old computer, it may be time to retire it and get something more up to date. If you have a usable monitor, you can find computers with a reasonably fast processor and a decent amount of memory and hard disk space for $500 - $600.

3. Develop a contingency plan. Most facilities have an emergency plan to deal with all kinds of disasters, from floods to hurricanes to chemical spills. Make sure your emergency contingency plans can deal with the sorts of things that could happen if the Y2K bug hits your plant. You may have to have crews at the plant around the clock if automatic equipment malfunctions. Look at your facility, assess your needs, and make sure you've planned for as many possibilities as you can think of.

2. Make everyone aware that you know about the Y2K bug and that you have taken steps to deal with it. Your employees should be briefed about the contingency plans and what their roles are. Your customers should be informed that you have thing under control and that your service won't be lost at midnight on December 31st. Maybe you could put a bill stuffer in the next billing to reassure your customers. Even if nothing happens, they'll feel better if they know you're prepared.

1. Make sure you're prepared at home. Again, there's little chance that utilities will fail. Their people are making a huge effort to insure that there is no interruption in the power, phone or water services. As those of us in the southern two-thirds of the state found out in January of 1998, it doesn't hurt to be prepared. Many of us had to leave our homes and stay in shelters for several days. Others huddled with friends or relatives who had wood stoves, kerosene lanterns or generators. Stock up on non-perishable foods, keep your car filled with gas, and keep a little extra cash on hand, in case the ATM machines don't work. Don't overdo,

like some people are recommending, but be prepared.

Y2K Internet Sites:

http://www.zdnet.com/enterprise/zdy2k/ - This is a site maintained by Ziff-Davis, the company that published *PC Magazine, MAC Magazine*, and several other personal computer publications.

http://www.sba.gov/y2k/ - this is a Y2K site maintained by the Small Business Administration. They also have a toll-free telephone information line at 877-789-2565.

http://www.epa.gov/y2k/ - this is a Y2K site maintained by the Environmental Protection Agency.

Dick Darling

Mercury Testing Question

I was asked a question about mercury testing and wanted to pass on the answer in case it comes up again.

Q. What types of samples and test methods are to be used?

A. The clean method - EPA 1631 – should be used for all effluent samples. Grab samples are acceptable, unless DEP determines that grabs will not be representative (HoltraChem is the only place I know of where they are not). In collecting grabs, operators should get them during peak periods of flow, typically the normal workday hours. They should avoid early morning samples when flows are low. If plants want to do composites, they can do so by either collecting a series of grabs during the day or using clean composite samplers; EPA 1669 provides the methods for doing this.

Dennis Merrill

For Practice

1. The best definition of the word "communication" is:
   a. Talking to others and making your point.
   b. Writing memos and reports.
   c. Transferring information to and from others.
   d. Making sure other people know what you are thinking.

2. How much water is in a 6-inch line 800 feet long?
   a. 1175 gallons
   b. 736 gallons
   c. 1539 gallons
   d. 573 gallons

3. A sample with a pH of 4.5 is
   a. Alkaline
   b. Neutral
   c. Acidic
   d. Basic

4. To improve settling in a clarifier, you should
   a. Decrease the hydraulic detention time in the clarifier
   b. Increase flow to the clarifier
   c. Use mixers to suspend the sludge
   d. Make sure there is a uniform low velocity across the clarifier

Certification News

Operators who renewed their certifications in March should have received their notification of renewal letters by now. If you have an ***odd*** certificate number and you mailed your renewal form and check in and have not received a renewal confirmation and pocket certificate renewal card, please contact us as soon as possible. Any of you who were due for renewal but didn't file with us should have received a letter stating that your certificate was now inactive. If you paid your fee but were short on training hours, you should have received a letter to that effect. If you have an odd numbered certificate and you haven't heard from us, let us know immediately.

Spring Exam

We have received 102 applications for the Spring Wastewater Operator Certification Exam. This is the lowest number of people taking the exam that I can remember since I've been involved with the program. The exam will be given in the usual locations in Augusta, Bangor and Presque Isle on May 12, 1999. If you signed up for the exam, you should have received a letter from us confirming the date and time. If you signed up to take the exam but didn't get a letter, call us.
Dick Darling

UPCOMING TRAINING COURSES

April 16, 1999 in Presque Isle, ME, Wastewater Operator Certification Course for Exam Level I & II - approved for 5.5 hours, sponsored by MRWA (207) 729-6569.
April 27 1999 in Presque Isle, ME, Wastewater Operator Certification Course for Exam Level III & IV - approved for 5.5 hours, sponsored by MRWA (207) 729-6569.
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April 27, 1999 in Kittery, ME, Basic Process Control Tests for Activated Sludge Systems - approved for 6.0 hours, sponsored by JETCC (207) 767-2539.
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April 29 1999 in Presque Isle, ME, "One Plan"/Integrated Contingency Planning - approved for 3.5 hours, sponsored by MRWA (207) 729-6569.
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April 30 1999 in Augusta, ME, "One Plan"/Integrated Contingency Planning - approved for 3.5 hours, sponsored by MRWA (207) 729-6569.
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May 4 1999 in Old Orchard Beach, ME, General Laboratory Procedures & Measurement of pH, Turbidity and Chlorine - approved for 3.5 hours, sponsored by MRWA (207) 729-6569.
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May 4 1999 in Bangor, ME, General Laboratory Procedures & Measurement of pH, Turbidity and Chlorine - approved for 3.5 hours, sponsored by MRWA (207) 729-6569.
*****
May 5 1999 in Auburn, ME, Wastewater Operator Certification Course for Exam Level III & IV - approved for 5.5 hours, sponsored by MRWA (207) 729-6569.
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May 6, 1999 in Bangor, ME, Wastewater Operator Certification Course for Exam Level III & IV - approved for 5.5 hours, sponsored by MRWA (207) 729-6569.

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May 20, 1999 in Bangor, ME, Troubleshooting WWTP Operations - approved for 6.0 hours, sponsored by JETCC (207) 767-2539.

Answers to *For Practice:*

1. c. Communication is the transfer of information both to you and from you.
2. a. The volume of the pipe is 0.785 x (diameter in feet)^2 x length in feet x 7.5 gallons/cubic foot 0.785 x 0.5 x 0.5 x 800 x 7.5 = 1175 gallons

3. c. Neutral pH is 7.0. Any liquid having a pH less than 7.0 is acidic. Any liquid having a pH greater than 7.0 is alkaline or basic.

4. d Clarifiers depend on slow, uniform flow to allow the solid particles to settle out of the water before the water leaves the clarifier. Decreasing the detention time, which is usually done by increasing flow, will allow less time for settling. Stirring the clarifier with mixers will resuspend the solids.

MEMORANDUM

Date: **March 26, 1999**

To: **Enforcement Staff**

From: **Jim Dusch**
Director of Procedures and Enforcement

Subject: **Year 2000 Problem Testing**

The Department recognizes that the operation of certain computer systems may be affected by the so-called "Year 2000 Y2K') Problem". The resulting problems are typically caused when a system is unable to recognize that data entered into a two digit year identifier field refers to 2000, not some other year ending with those same digits.

The Department will respond to situations where non-compliance with environmental requirements results from computer system testing associated with preparations for the Y2K problem consistent with the U.S. Environmental Protection Agency's *Y2K Enforcement Policy*, issued November 30, 1998. The detail provided in provisions of EPA's policy will govern the Department's evaluation of an entity's eligibility for civil monetary penalty relief. The Federal Register notice of this EPA policy, published March 10, 1999, 64 Fed. Reg. 11881 is attached.

Please note that the testing procedures advocated by this EPA policy do not include a need for prior approval by the agency. As a result, entities must only meet the burden of proof and disclosure requirements placed on them by the policy once a violation of environmental requirements has occurred.

The public expects compliance with our environmental laws. As such, regulated entities must take all steps necessary to anticipate and resolve potential environmental compliance problems, including those that may result from Y2K-related equipment problems.

Computer Capability Questionnaire

The Maine Department of Environmental Protection is applying for a grant from the U.S. Environmental Protection Agency to develop a system for electronic maintenance and filing of compliance reports. If and when we develop this system, you will be able to keep your DEP 49 forms and DMRs on computer and file them electronically. As a first step in the process of designing a system, we need to know if you have a computer at your facility or have access to one. If so, we need to know what type of computer you have and what programs you have for it. Please take a few minutes and fill out this questionnaire and return it with your DMR.

Name of Your Facility: _____

NPDES Number: _____ Date Completed _____

Do you have a computer at your facility? ( )Yes ( )No

If Yes, what type of computer ? ( ) IBM PC Compatible ( ) Apple Macintosh

( ) Other, specify _____

If IBM Compatible, what operating system are you using? ( ) MS-DOS ( ) Windows 3.1

( ) Windows 95/98 ( )Other , specify_____

What other programs do you normally use?

( ) Spreadsheet (Excel, Lotus 1-2-3), Quattro Pro, etc.)

( ) Word Processing Programs (MS Word, Word Perfect. WordPro, etc.)

( ) Database Management Systems (MS Access, dBase, Paradox, etc.)

( ) Other, specify _____

If the DEP develops and makes a program available for you to keep your daily monitoring data and prepare your 49 Form and DMR's at the end of the month, you be willing to be trained to use this program and use it on a regular basis?

( ) Yes ( )No If no, please explain _____

_____

_____

Thank you for your cooperation! Dick Darling